

(12) INTERNATIONAL APPLICATION PUBLISHED UNDER THE PATENT COOPERATION TREATY (PCT)

(19) World Intellectual Property Organization
International Bureau



(43) International Publication Date
9 March 2006 (09.03.2006)

PCT

(10) International Publication Number
WO 2006/025577 A1

(51) International Patent Classification:
H04B 1/69 (2006 01) H04L 1/00 (2006 01)
H04L 1/08 (2006 01)

(72) Inventor; and

(75) Inventor/Applicant (for US only): YAMAMOTO, Naotake [JP/JP]

(21) International Application Number:
PCT/JP2005/0 16204

(74) Agent: HIRANO, Kazuyuki, Hirano Patent Office, 1-23-203, Tenjin 4-Chome, Chuo-Ku, Fukuoka-Shi, Fukuoka, 8100001 (JP)

(22) International Filing Date: 30 August 2005 (30.08.2005)

(81) Designated States (unless otherwise indicated, for every kind of national protection available): AE, AG, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BW, BY, BZ, CA, CH, CN, CO, CR, CU, CZ, DE, DK, DM, DZ, EC, EE, EG, ES, FI, GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, KE, KG, KM, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MA, MD, MG, MK, MN, MW, MX, MZ, NA, NG, NI, NO, NZ, OM, PG, PH, PL, PT, RO, RU, SC, SD, SE, SG, SK, SL, SM, SY, TJ, TM, TN, TR, TT, TZ, UA, UG, US, UZ, VC, VN, YU, ZA, ZM, ZW

(25) Filing Language: English

(84) Designated States (unless otherwise indicated, for every kind of regional protection available): ARIPO (BW, GH, GM, KE, LS, MW, MZ, NA, SD, SL, SZ, TZ, UG, ZM, ZW), Eurasian (AM, AZ, BY, KG, KZ, MD, RU, TJ, TM),

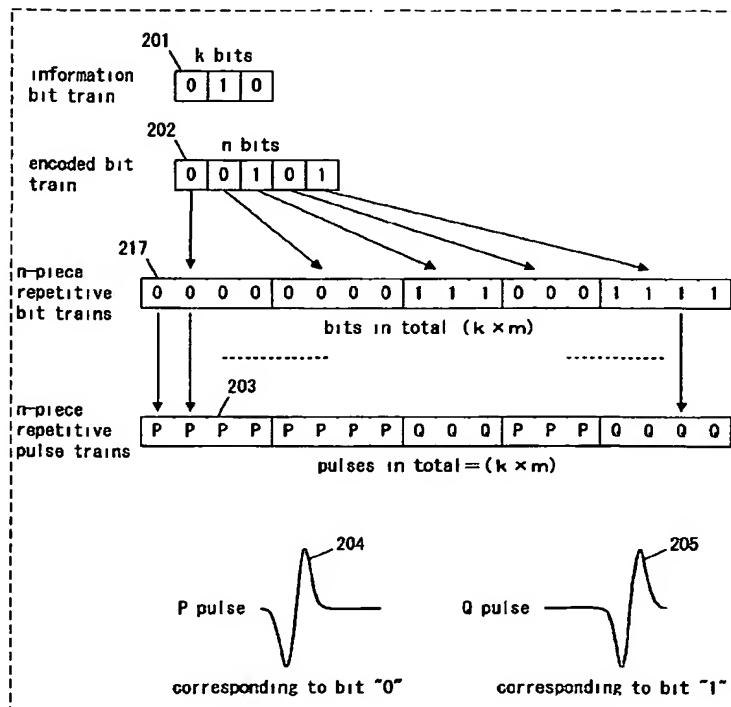
(26) Publication Language: English

(30) Priority Data:
2004-255289 2 September 2004 (02.09.2004) JP

(71) Applicant (for all designated States except US): MATSUSHITA ELECTRIC INDUSTRIAL CO., LTD. [JP/JP], 1006, Oaza Kadoma, Kadoma-Shi, Osaka, 5718501 (JP)

[Continued on next page]

(54) Title: TRANSMITTING METHOD, RECEIVING METHOD, TRANSMITTING DEVICE, RECEIVING DEVICE AND TRANSCIEVING DEVICE



(57) Abstract: A transmitting device of the present invention comprises an encoder (20), a transmitting unit (100) including a pulse generator (30) and a parallel-to-serial converter (50), a transmitting control unit (40), and an antenna (90). The pulse generator (30) comprises a first pulse train generator (31), a second pulse train generator (32), and an n-th pulse train generator (33). A k-bit information bit train is inputted from the information signal source (10). The encoder (20) encodes the k-bit information bit train into an n-bit encoded bit train at a coded rate of (k/n). The pulse generator (30) generates n-piece repetitive pulse trains corresponding to the n-bit encoded bit train. The antenna (90) transmits the n-piece repetitive pulse trains as UWB-IR.

WO 2006/025577 A1



European (AT, BE, BG, CH, CY, CZ, DE, DK, EE, ES, FI, FR, GB, GR, HU, IE, IS, IT, LT, LU, LV, MC, NL, PL, PT, RO, SE, SI, SK, TR), OAPI (BF, BJ, CF, CG, CI, CM, GA, GN, GQ, GW, ML, MR, NE, SN, TD, TG).

For two-letter codes and other abbreviations, refer to the "Guidance Notes on Codes and Abbreviations" appearing at the beginning of each regular issue of the PCT Gazette.

Published:

— *with international search report*